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AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An automation system for controlling and monitoring devices comprising:

a plurality of devices to be controlled, each device comprising:

a radio frequency receiver for receiving signals,

a radio frequency transmitter for transmitting signals,

a processor for administering the reception and transmission of signals,

a first memory adapted to hold a device identifier identifying the device, and

means for providing an output to, or receiving an input from, an appliance operationally connected to the device,

a first controller comprising:

a radio frequency transmitter for transmitting signals,

a radio frequency receiver for receiving signals,

a first memory comprising an organized data structure holding device identifiers of devices controlled by the first controller,

a second memory holding a controller identifier identifying the first controller, and

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a processor for administering the reception and transmission of signals and being adapted to store one or more device identifiers in the first memory, the processor comprising means for generating a first signal comprising one or more destination identifiers corresponding to device identifiers of one or more destination devices, information related to the operation of the appliances connected to said destination devices, and, if necessary, repeater identifiers corresponding to one or more signal repeating devices,

wherein one or more of the plurality of devices are further adapted to

C1 • act as signal repeating devices in that the processors of each of said one or more devices comprises means for, upon reception of a first signal, processing said information in its processor if one of the one or more destination identifiers corresponds to the device identifier of the device, and means for, upon reception of a first signal, transmitting a second signal holding at least said destination identifiers and said information if one of the one or more repeater identifiers corresponds to the device identifier of the device, and

• act as I/O devices in that the processors of each of said one or more devices comprises means for generating an event signal in response to input received from an appliance or user, the event

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signal comprising one or more destination identifiers corresponding to controller or device identifiers of one or more destination controllers or destination devices.

2. (Currently Amended) An automation system according to claim 1, wherein all devices are adapted to act as ~~repeaters~~repeating devices.

3. (Cancelled)

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4. (Original) An automation system according to claim 1, wherein the first memory of the first controller comprises a routing table indicating, for each device, other devices which can receive and process a signal transmitted by said device.

5. (Original) An automation system according to claim 4, wherein the processor of the first controller comprises means for identifying in the routing table device identifiers of devices for repeating a first signal having a predetermined destination identifier, and to include said device identifiers as repeater identifiers in the first signal.

6. (Original) An automation system according to claim 1, wherein one or more of the plurality of devices are further adapted

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to receive an input from the appliance connected thereto, and wherein the processor of a device is adapted to, in response to the received input, generate and transmit a first signal.

7. (Original) An automation system according to claim 6, wherein the received input or data corresponding thereto is comprised in the first signal.

8. (Original) An automation system according to claim 6, wherein the received input is stored in the first memory of the device.

9. (Original) An automation system according to claim 1, wherein the appliance connected to one or more of the plurality of devices is a sensor selected from the group consisting of electromagnetic radiation sensor, luminosity sensor, moisture sensor, movement sensor, temperature sensor, mechanical actuator contact, sound sensor, pressure sensor, electric signal sensor, smoke detector, audio pattern recognizing means, visual pattern recognizing means and molecular composition analyzing means.

10. (Currently Amended) An automation system according to claim 9, wherein the sensor measures the impedance ~~of an electric~~

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~~signal, such as the capacitance, such as the resistance, such as~~  
~~the or inductance of an electric signal.~~

11. (Original) An automation system according to claim 1, wherein one or more of the plurality of devices are further adapted to generate an output to the appliance connected thereto in response to a received signal, said output being related to the operational state of the appliance.

12. (Original) An automation system according to claim 11, wherein the output is electric power, and wherein a device can adjust the output power at a level according to a setting comprised in the received signal.

13. (Original) An automation system according to claim 11, wherein a device is adapted to prohibit the output in response to a received first set of instructions or a first code or predetermined action provided by the user, and wherein said restriction can only be removed in response to a received second set of instructions or a second code or predetermined action provided by the user.

14. (Original) An automation system according to claim 13, wherein the first controller is adapted to generate the first and the second set of instructions, and wherein the user is must

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provide a code or perform a predetermined action in order for the first controller to generate said second set of instructions.

15. (Currently Amended) A method for establishing an RF automation system network for controlling and monitoring devices, said method comprising the steps of:

providing a first controller comprising:

a radio frequency transmitter for transmitting signals,

a radio frequency receiver for receiving signals,

a first memory comprising an organized data structure holding device identifiers of devices controlled by the first controller,

a second memory holding a controller identifier identifying the first controller, and

a processor for administering the reception and transmission of signals and being adapted to store one or more device identifiers in the first memory,

providing a plurality of devices to be controlled by the first controller, each device comprising:

a radio frequency receiver for receiving signals,

a radio frequency transmitter for transmitting signals,

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a processor for administering the reception and transmission of signals,

a first memory adapted to hold a device identifier identifying the device, and

a processor for administering the reception and transmission of signals and being adapted to provide an output to, or receive an input from, an appliance operationally connected to the device,

wherein one or more of the devices are adapted to act as I/O devices in that the processors of each of said one or more devices comprises means for generating an event signal in response to input received from an appliance or user, the event signal comprising one or more destination identifiers corresponding to controller or device identifiers of one or more destination controllers or destination devices,

generating a first signal comprising one or more destination identifiers corresponding to identifiers of one or more destination devices or destination controllers, information related to the operation of an appliance connected to a device, and one or more repeater identifiers corresponding to one or more signal repeating devices,

transmitting said first signal,

receiving the first signal at one of said plurality of devices,

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if one of the one or more destination identifiers corresponds to the device identifier of the receiving device, then processing said information in the processor of the device, and

if one of the one or more repeater identifiers correspond to the device identifier of the receiving device, then transmitting a second signal holding at least said one or more destination identifiers and said information.

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16. (Original) A method according to claim 15, wherein the first signal is transmitted by the first controller, the one or more destination identifiers comprised in the first signal is a device identifier, and the information comprised in the first signal comprises instructions to a processor of the destination device to provide an output to, or receive an input from, the appliance connected to the destination device.

17. (Original) A method according to claim 15, wherein the first signal is transmitted by a device and wherein the destination identifier comprised in the first signal is a controller identifier and wherein the information held by the first signal is related to a state or a reading of the device transmitting the first signal.

18. (Original) A method according to claim 15, further comprising the step of building a routing table indicating, for



each device, other devices which can receive and process a signal transmitted by said device, and storing the routing table in the first memory of the first controller.

19. (Original) A method according to claim 18, further comprising the steps of identifying device identifiers in the routing table of devices for repeating a first signal having a predetermined destination identifier, and including said device identifiers as repeater identifiers in the first signal.

20. (Original) A method according to claim 15, further comprising the step of, upon receiving a first or a second signal at a device, generate and transmit an acknowledgement signal having the identifier of the device or controller transmitting the first or second signal as destination identifier.

21. (Original) A method according to claim 20, wherein the acknowledgement signal comprises a destination identifier and one or more repeater identifiers, the method further comprising the steps of receiving said acknowledgement signal at a device and if one of the one or more repeater identifiers correspond to the device identifier of the receiving device, then transmitting a signal holding said destination identifiers and the acknowledgement.

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22. (New) A method according to claim 16, further comprising the step of receiving input from an appliance or user at the one or more I/O devices and generating an event signal in response to the received input.

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